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MICROSTRUCTURES IN THE POLAR SOLAR WIND: ULYSSES

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We find that small (10-200 rP) magnetic decreases comprise a dominant part of the polar solar wind microstructure at Ulysses distances (2.2 AU). These magnetic field dips are almost always bounded by tangential discontinuities, a feature which is not well understood at this time. Hundreds of these events have been examined in detail and a variety of types have been found. These will be described. It is speculated that these structures have been generated by perpendicular heating of ions closer to the Sun and have then been convected to distances of Ulysses. Such structures may be very important for the rapid cross- field diffusion of ions in the polar regions of the heliosphere.

Submittal Information

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